

Public Meeting

Cool Creek Watershed Management Plan

May 21, 2002



City of Carmel



Town of Westfield



Hamilton County





Agenda

- Project Purpose/Scope Review
- Progress Review/Findings to Date
- Upcoming Activities
- Input on Drainage Problem Areas



Project Purpose

- Identify and solve existing stormwater flooding problems (focus on regional problems associated with Cool Creek and its tributaries)
- Prevent future stormwater problems due to rapid development

Story 1434 - Microsoft Internet Explorer

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NEWS / CENSUS 2000

Hamilton County growth paces Indiana, brings challenges

By JOSH DUKE, Ledger regional editor jduke@topics.com
March 10, 2001 -- Hamilton County eclipsed all Indiana counties, ranking No. 1 in population growth and percent of population change from 1990 to 2000, according to Census 2000 numbers released Friday.

The population increased by 73,804 people, a 67.7 percent jump during the 1990s.

Hamilton outdistanced Marion County, which finished second in population growth with 63,295. In fact, Hamilton, Marion and Johnson counties combined to account for 30 percent of the entire state's growth during the decade.

Malcolm Bray, 85, was born in rural Westfield, and has lived there most of his life. Hamilton County's explosive growth is no surprise to him.

More on Census 2000
[Click here](#) to go to an index of stories on Census 2000.

Links
* [USA Today.com's census data and maps](#)
* [STATS Indiana](#)
* [U.S. Census Bureau](#)

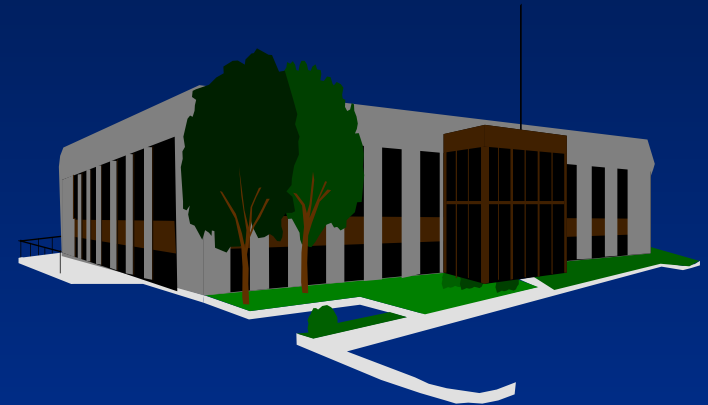
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Growth...



Planning is key to town's growth

■ Master plan gives officials map to follow to ensure that town expansion is smooth.

By Phil Dunlap
Correspondent

Annexation, investment in technology and expanding infrastructure are topics of discussion for Westfield officials these days.

They're all signs of a growing community.

This month, the town is preparing to annex about 264 acres on top of 102 acres annexed in December. An additional 350 acres are being considered for

WESTFIELD

annexation by the end of the year.

Westfield also is negotiating with land owners and developers to annex an additional 1,700 acres by July 2003, assuming the economy and real estate markets remain steady.

There is no controversy, no angry outcry from the public — just a smooth transition for several parcels asking to be brought into the town.

"We want to be a smart growth community and (do it) in an orderly fashion, building out from our existing base," said Westfield Town Manager David Johnston.

"It's all driven by our 2020 Comprehensive Plan."

The town requires written agreements with developers that their subdivisions will become part of Westfield once the municipal limits are contiguous with their developments.

The new 340-acre Centennial subdivision built by the Estridge Co., south of 156th Street between Spring Mill and Ditch roads, falls under these guidelines and will become part of the town when annexation reaches it.

The new 590-acre Bridgewater Club, a planned-unit development with a golf course, retail/commercial and residential areas, also is expected to become

a part of the town.

For growth to progress logically and make annexation practical, the water, sewer and road infrastructure must be in place.

"We've had a water and sewer master plan completed since last January, and have received a special sewer grant with the help of (U.S. Rep. Dan) Burton's office to help open up the westside of U.S. 31 to economic development — particularly the (230-acre) Thunder Island property," Johnston said.

This year, Westfield Utilities bought the portion of Hamilton Western Utilities that served

See Growth, Page NB6



Growth

■ Town growth is estimated at 1,300 people a year.

From NB1

Washington and Noblesville townships. Those parts of Hamilton Western originally were built by Wilfong Development nearly 30 years ago to serve its own subdivisions. The move substantially increases Westfield's water/sewer infrastructure.

Johnston said the Town Council also has sent a draft of a new thoroughfare plan to the Plan Commission for review over the next few months.

He said officials have made roads a priority out of necessity.

"We're estimating we now gain about 1,300 people a year in our town. That's quite a population jump — and along with that come vehicles."

Town officials also are excited about access to technology.

From cell phone networks and wireless technology to fiber optics, Johnston says it's up to the community to plan and make certain technology is available.

"We need to package Westfield to be successful in its economic development, decide which area we want to target and do some niche marketing. We do have competitive assets, and we need to understand that we can't just settle for anything," he says.

Project Scope

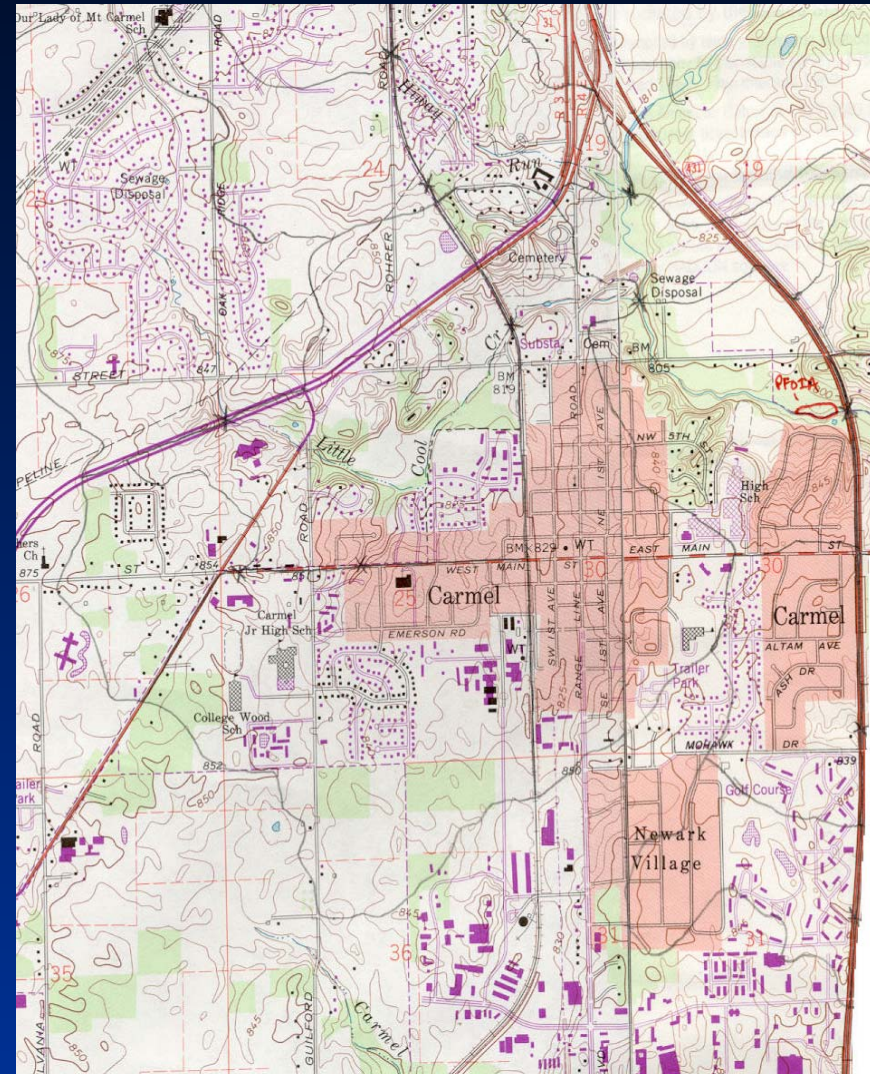
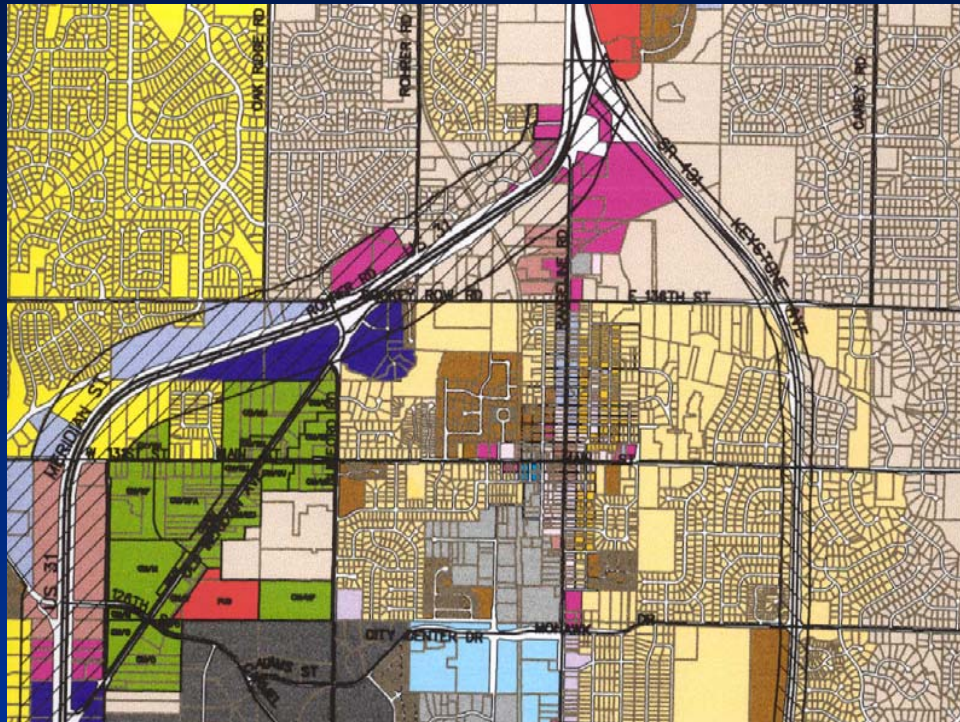
- Inventory & Problem Identification
- Problem Analysis
- Solution Development
- Recommendations and Implementation
- Watershed Management Plan



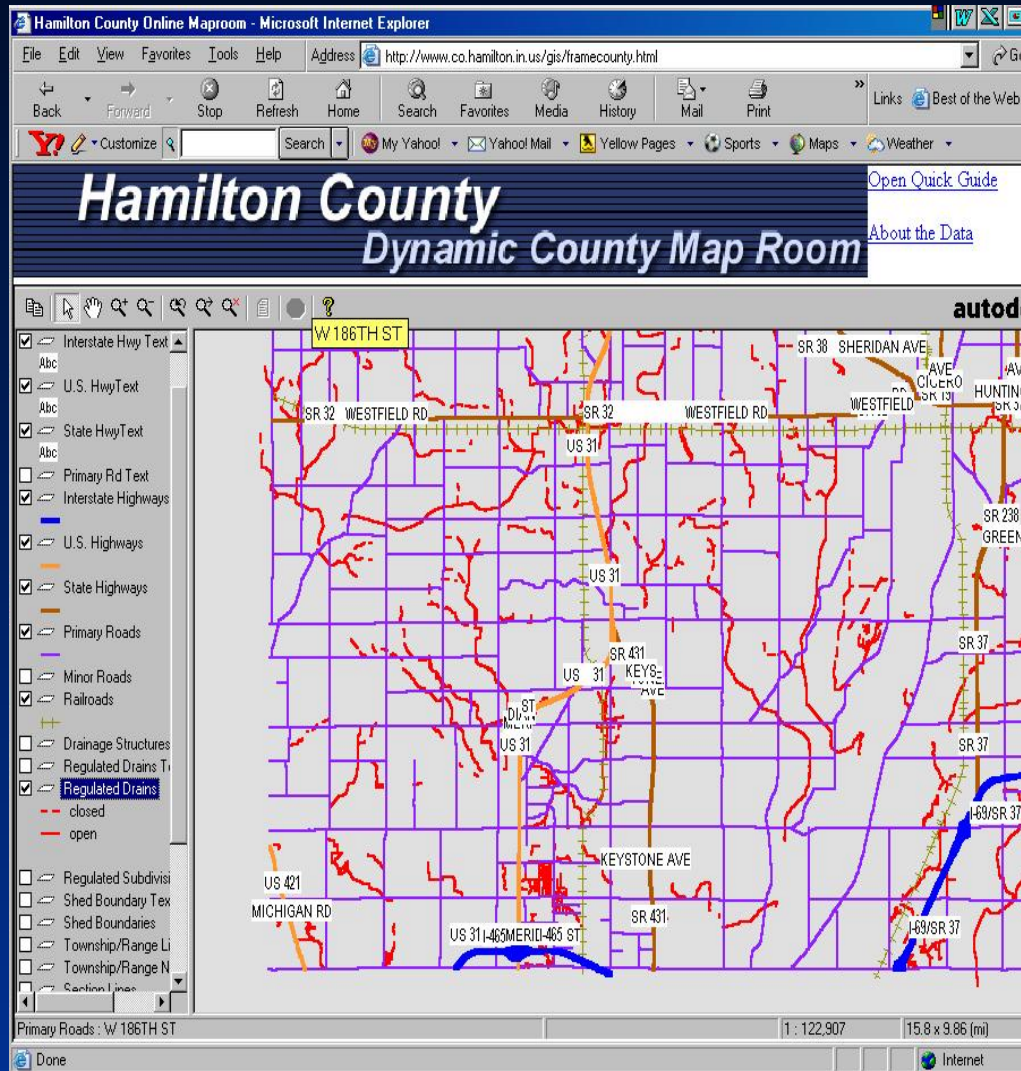
Inventory & Problem Identification

Inventory & Problem Identification

- Maps, Plans, Reports

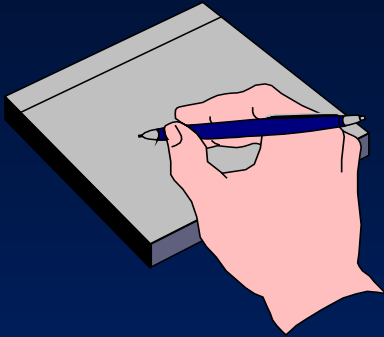


Inventory & Problem Identification



- Hamilton County online mapping

Inventory & Problem Identification



- Standards, Ordinances, Policies

- Interviews



Inventory & Problem Identification

- Public Input



Microsoft Excel - Project Summary.XLS

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B17 Water has overtopped the road in the past and caused severe washout

	A	B	C	D	E
1					
2					
3	PROJECT NAME/LOCATION	PROJECT DESCRIPTION			
4	116th Street and Gray Road	Severe streambank erosion on Cool Creek between 116th St. and Gray Road			
5	Brookshire Golf Course and Windsor drive	Cool Creek bank erosion into sand (may have been rip-rapped)			
6	151st Street and Oak Road	Owner of property at Northeast corner of intersection concerned with increased flooding after Oak Road bridge reconstruction			
7	Cool Creek Park	Erosion problems and flooding of roadways in park			
8	171st Street at Westfield Utilities Facility	Cool Creek between Grassy Branch and 171st Street contains beaver dams; Undersized crossing			
9	186th Street and Grassy Branch Road	General concern when Grassy Branch Road is widened that ditch will be too close to road			
10	191st Street and Flippins Road	Ponding water in Northeast corner of intersection in field			
11	Mary Wilson Drain	Drain needs to be reconstructed			
		Significant ponding and backups on East side			

Sheet1

Draw AutoShapes

Ready

Inventory & Problem Identification



Cool Creek at 151st St



Anna Kendall Drain, Westfield

- Field Investigation



Mary Wilson Drain, Soccer Fields

Inventory & Problem Identification



Grassy Branch Road North of SR 32



Inventory & Problem Identification



Cool Creek near confluence with White River

Cool Creek in Brookshire Golf Course



Inventory & Problem Identification

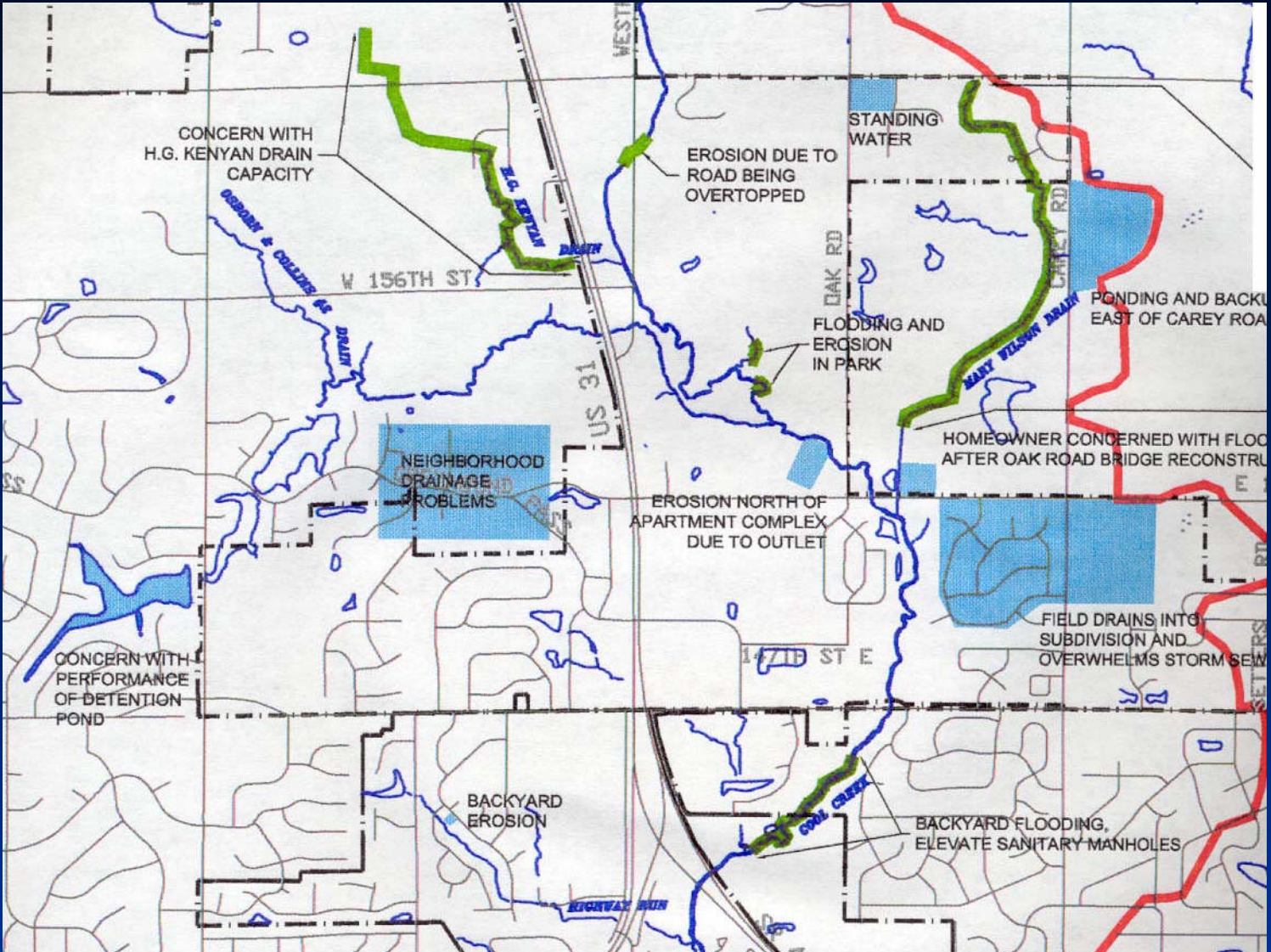
Microsoft Excel - PhotoLog.XLS


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	A	B	C
1	COOL CREEK WATERSHED MANAGEMENT PLAN		
2	FIELD INSPECTION		
3	01/29/2002		
4			
5	Picture No.	Location	Description
6	1	Confluence of with White River	A lot of debris build-up
7	2	Confluence of with White River	Debris build-up
8	3	Slightly upstream of confluence in Northern Reach Park	Log jam
9	4	Slightly upstream of confluence in Northern Reach Park	Severe bank erosion and log jams
10	5	Looking downstream from Hazel Dell Bridge	Moderate canopy along creek
11	6	Cool Creek, See Map	Gabions and new outfalls constructed within last 3 years (approx. 300 foot stretch of creek)
12	7	Cool Creek, See Map	Moderate bank erosion on sharp bend

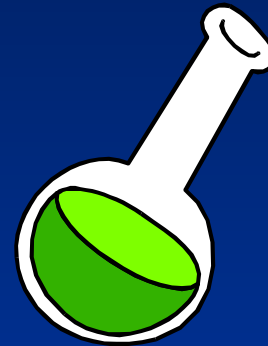




Problem Analysis

Problem Analysis

- Field Survey for detailed reach information
- Develop computer model of stream
- Stream Sampling



Hydrologic/Hydraulic Analysis

Microsoft Excel - Subbasin Data.XLS

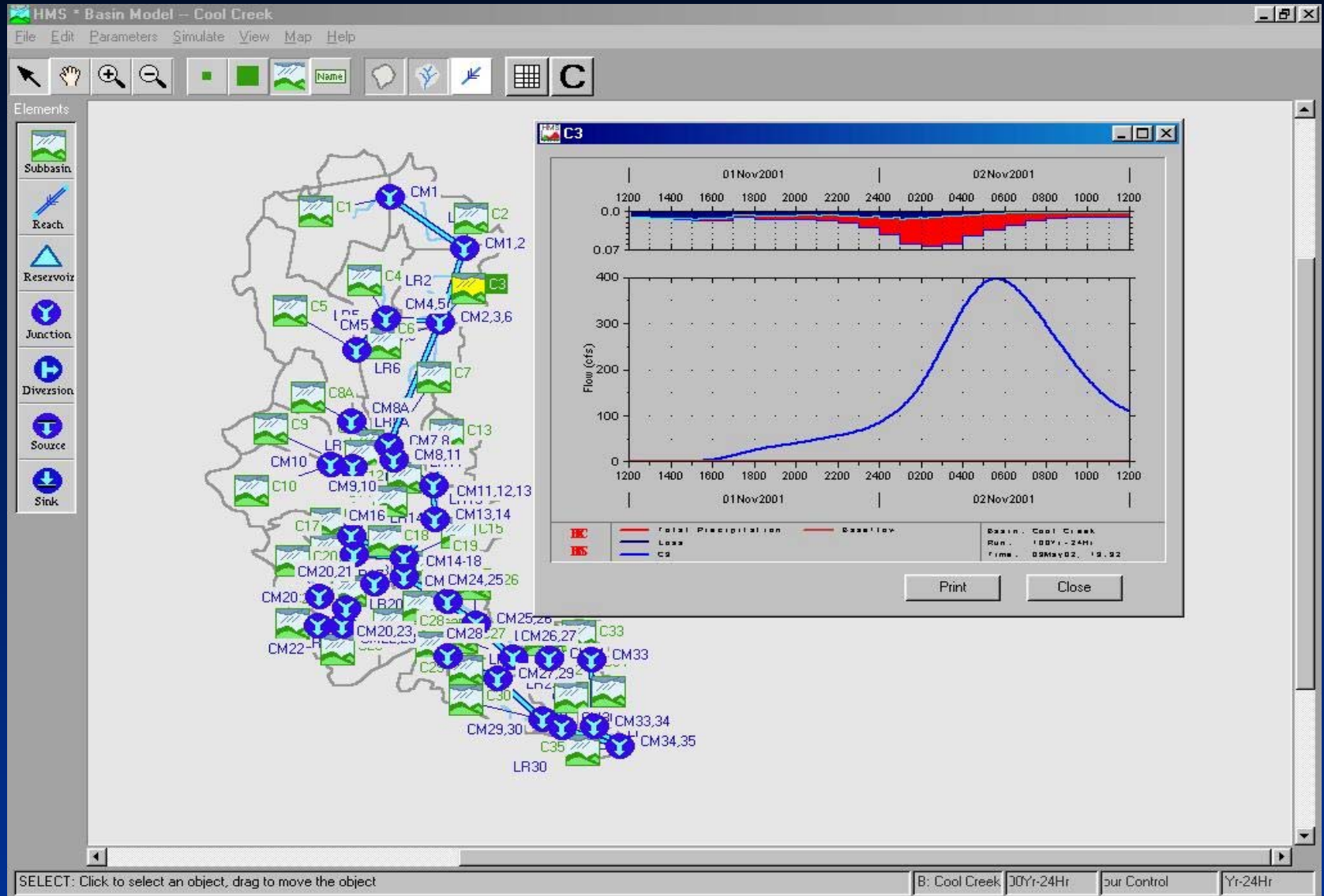
	A	B	C	D	E	F	G	H	I
	Sub-basin	Area (ft ²)	Area (acres)	Area (sq mi)	Soil Types	B	C	D	CN _{weighted}
1									
2	C1	52,328,104	1201.3	1.88	CrA, Br, We, OcA, MmB2, MoC3, Pn, Or, Pt	50%	48%	2%	81
3	C2	32,860,065	754.4	1.18	CrA, MmB2, OcA, Br, We, MoC3, MmC2, Pn	55%	45%	0%	81
4	C3	31,744,063	728.7	1.14	CrA, Br, We, MmB2, OcA, Pt, Or, MoC3, Pn, FnA	75%	24%	1%	80
5	C4	24,676,049	566.5	0.89	CrA, Pn, Br, MmB2, Or, Sh	45%	55%	0%	80
6	C5	54,499,109	1251.1	1.95	CrA, MmB2, Br, Sh, Pn, St, Pt	49%	50%	1%	75
7	C6	11,036,022	253.4	0.40	Or, CrA, MmB2, Sh	50%	50%	0%	77

Excel - Design Rainfall.xls

	B	C	D	E	F	G	H	I	J
					Storm		5 year		
		2 year			Time		1 hour		
fall	1.37	inches			Total Rainfall		1.71	inches	
	Time (hr)	Rain (in)					Time (hr)	Rain (in)	
	0.05	0.16					0.05	0.21	
	0.08	0.27					0.08	0.34	
	0.10	0.34					0.10	0.43	
	0.15	0.52					0.15	0.65	
	0.17	0.59					0.17	0.74	
	0.20	0.70					0.20	0.87	
	0.25	0.85					0.25	1.06	
	0.30	0.95					0.30	1.18	
	0.33	0.99					0.33	1.23	
	0.35	1.01					0.35	1.27	
	0.40	1.07					0.40	1.33	
	0.42	1.09					0.42	1.35	
	0.45	1.11					0.45	1.39	
	0.50	1.15					0.50	1.44	
	0.55	1.18					0.55	1.47	
	0.58	1.19					0.58	1.49	
	0.60	1.21					0.60	1.50	
	0.65	1.23					0.65	1.54	
	0.67	1.24					0.67	1.55	
	0.70	1.26					0.70	1.57	
	0.75	1.29					0.75	1.61	
	0.80	1.30					0.80	1.62	

- Soil & Rainfall Data

HEC Modeling



Stream Sampling Locations

- 116th Street Crossing
- 146th Street Crossing
- Grassy Branch Road North of SR 32



Sampling Results

Microsoft Excel - Sampling Data.XLS

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	A	B	C	D	E	F
1						
2			NURP	116th St Crossing	146th St Crossing	Grassy Branch Road
3	BOD	mg/L	12	5.1	5	5
4	COD	mg/L	80	10	10	10
5	Nitrogen, Kjeldahl	mg/L	2	2.3	2.1	1.1
6	Nitrogen, Nitrate	mg/L	0.9	0.9	1.2	2.2
7	Nitrogen, Ammonia	mg/L	N/R	0.88	5.1	4.3
8	Suspended Solids	mg/L	175	120	61	11
9	Dissolved Solids	mg/L	N/R	280	290	390
10	E coli	/100 mL	N/R	900	300	900
11						



**Solution
Development &
Recommendations**

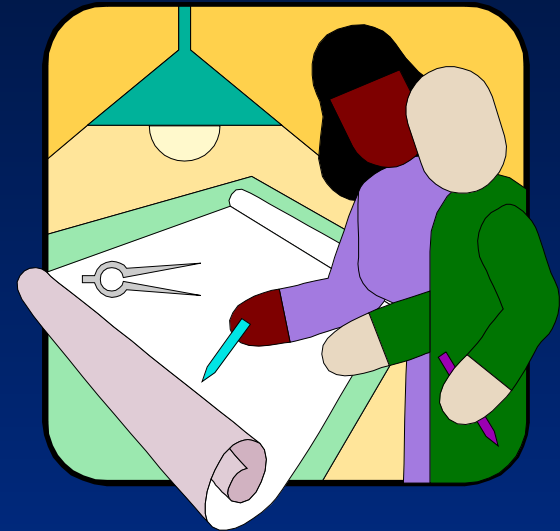
Solution Development

- Modifications to ordinances, standards, and policies
- Preliminary design solutions for local and regional problems (size, location, etc.)
- Meet with developers and public



Recommendations/Implementation

- Finalize policy and watershed improvements
- Prepare final report
- Funding alternatives



A black and white photograph of a bridge over a river. The bridge has a wooden railing and is supported by concrete pillars. The river is in the foreground, and there are trees and bushes on the banks. A large, light-colored oval is superimposed over the center of the image, containing the text "Upcoming Activities" in yellow.

Upcoming Activities

Upcoming Activities

- Solution development
- Continue stream sampling
- Continue public input
- Watershed Management Plan
- Hamilton County Website



www.co.hamilton.in.us/news/Public.htm

A black and white photograph of a bridge over a river. The bridge has a wooden railing and is supported by concrete pillars. The river is in the foreground, and there are trees and bushes on the banks. A large, light grey oval is overlaid in the center of the image, containing the text "Public Input" in a bold, yellow, serif font.

Public Input